

CLAIMS

1 1. A cross media error protection system for multimedia data having a plurality of media
2 streams of different type, the system comprising:

3 a packaging system for packaging the multimedia data into discrete packets,
4 wherein each packet includes a plurality of fields, and wherein data segments from each
5 of the media streams are placed into different ones of the plurality of fields; and

6 an insertion system for inserting error protection data into one of the plurality of
7 fields in each packet.

1 2. The cross media error protection system of claim 1, wherein a size of each of the
2 plurality of fields is proportional to a size of each of the plurality of media streams.

1 3. The cross media error protection system of claim 1, wherein a size of each of the
2 plurality of fields is set at predetermined proportions.

1 4. The cross media error protection system of claim 1, wherein the plurality of media
2 streams are selected from the group consisting of audio, video, graphics, and text.

1 5. The cross media error protection system of claim 1, further comprising a decoder for
2 decoding the discrete packets of multimedia data.

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1 8. A decoder for unpackaging multimedia data having a first and a second media stream
2 of different type, the decoder comprising:

3 means for reading multimedia data from discrete packets, wherein each packet
4 includes a first field having a segment from the first media stream, a second field having
5 a segment from the second media stream, and a third field having error protection data;
6 wherein the sizes of the first and second field are proportional to the sizes of the
7 first and second media stream.

1 9. The decoder of claim 8, wherein the first and second type of media streams are
2 selected from the group consisting of audio, video, text, and graphics.

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1 10. A method for providing cross media error protection for multimedia data, the method
2 comprising:

3 receiving multimedia data having a plurality of media streams, each of a different
4 type;

5 determining a size of each media stream;

6 packaging the multimedia data into a plurality of discrete packets, wherein each
7 discrete packet includes a data segment from each of the media streams, and wherein a
8 size of each packet is proportional to the size of each media stream; and

9 inserting error protection data into each packet.

1 11. The method of claim 10, wherein each of the discrete packets have a same size.

1 12. The method of claim 10, comprising the further step of transmitting the discrete
2 packets.

1 13. The method of claim 12, comprising the further step of decoding the discrete packets
2 back into the plurality of media streams.

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1 14. A program product stored on a recordable media for providing cross media error
2 protection for multimedia data, the program product comprising:
3 program code configured to receive multimedia data having a plurality of media
4 streams, each of a different type;
5 program code configured to determine a size of each media stream;
6 program code configured to package the multimedia data into a plurality of
7 discrete packets, wherein each discrete packet includes a data segment from each of the
8 media streams, and wherein a size of each packet is proportional to the size of each media
9 stream; and
10 program code configured to insert error protection data into each packet.

1 15. The program product of claim 14, where the size of each media stream is determined
2 over a predetermined interval of time.

1 16. The program product of claim 14, where the size of each media stream is estimated.